IN THE CLAIMS:

Please amend the claims as follows:

1.-11. (Canceled)

12. (Currently amended) An apparatus for selectively routing optical signals over more or more optical channels to and from one or more sample test sites, the apparatus comprising:

(a) a base;

(b) an optical channel selection device supported by the base and ~~rotatable about a central axis, the optical channel selection device~~ comprising an internal optical fiber including ~~having an internal optical fiber input end and~~ an internal optical fiber output end, the optical channel selection device rotatable for aligning the internal fiber output end with a selected one of a plurality of available optical channels whereby an optical signal can be transmitted to a test site corresponding to the selected optical channel ~~, the internal optical fiber input end disposed collinearly with the central axis and the internal optical fiber output end disposed at a radially offset distance from the central axis~~;

(c) a mounting member supported by the base; and

(d) a plurality of fiber-optic return lines corresponding to the optical channels, each return line including a return line input end for receiving an optical signal from a test site and ~~having~~ a return line output end fixedly supported by the mounting member for transmitting an optical signal to a signal receiving device.

13. (Currently amended) The apparatus according to claim 12 comprising a plurality of fiber-optic source lines corresponding to the plurality of optical channels and including ~~having~~ respective source line input ends fixedly disposed in a circular arrangement, wherein the internal optical fiber output end is alignable with a selected ~~each~~ source line input end ~~is selectively optically alignable with the internal optical fiber output end of the optical channel selection device~~ through incremental rotation of the optical channel selection device.

14. (Currently amended) The apparatus according to claim 12 wherein the optical channel selection device comprises:

(a) a rotary element rotatable about a ~~the~~ central axis, wherein the internal optical fiber is disposed in the rotary element and the internal optical fiber output end is disposed at a radially offset distance from the central axis ~~comprising an input end surface and an opposing output end surface, wherein the internal optical fiber input end is exposed at the input end surface and the internal optical fiber output end is exposed at the output end surface~~; and

(b) a ~~first~~ stationary element disposed adjacent to the rotary element ~~output end surface~~ and having a plurality of circumferentially spaced ~~first~~ stationary element apertures, wherein each ~~first~~ stationary element aperture is disposed at the radially offset distance from the ~~first~~ central axis, and the internal optical fiber output end is alignable with a selected one of the ~~first~~ stationary element apertures through rotation of the rotary element.

15. (Currently amended) The apparatus according to claim 14 wherein the ~~first~~ stationary element includes an ~~a first~~ annular section coaxially disposed around the rotary element.

16. (Currently amended) The apparatus according to claim 15 wherein the optical channel selection device comprises a ~~first~~ bearing coaxially interposed between the rotary element and the ~~first~~ annular section.

17. (Currently amended) The apparatus according to claim 14 wherein the internal optical fiber includes an internal optical fiber input end disposed collinearly with the central axis, and the apparatus further comprises an additional ~~comprising a second stationary element disposed adjacent to the input end surface, the second~~ stationary element having a central ~~second~~ aperture aligned ~~axially adjacent to the input end surface in alignment~~ with the internal optical fiber input end.

18.-21. (Canceled)

22. (Currently amended) The apparatus according to claim 12 comprising a plurality of sample test sites, each sample test site selectable for optical communication ~~optically communicating~~ with the internal optical fiber end of the optical channel selection device at a selected rotary index position thereof and with one of the optical return lines corresponding to the selected rotary index position.

23.-24. (Canceled)

Please add the following new claims:

25. (New) An apparatus for selectively coupling fiber optic lines comprising:

(a) an optical input selection device rotatable about a first central axis and comprising a first input end disposed collinearly with the first central axis and a first output end disposed at a radially offset distance from the first central axis;

(b) an optical output selection device rotatable about a second central axis oriented in non-collinear relation to the first central axis and comprising a second input end disposed at a radially offset distance from the second central axis and a second output end disposed collinearly with the second central axis; and

(c) a rotatable coupling mechanism interconnecting the optical input selection device and the optical output selection device.

26. (New) The apparatus according to claim 25 comprising a plurality of fiber-optic source lines including respective source line input ends disposed in a circular arrangement, wherein the first output end of the optical input selection device is selectively optically alignable with each source line input end through incremental rotation of the optical input selection device.

27. (New) The apparatus according to claim 26 comprising a plurality of fiber-optic return lines including respective return line output ends disposed in a circular arrangement, wherein the second input end of the optical output selection device is selectively optically alignable with each return line output end through incremental rotation of the optical output selection device.

28. (New) The apparatus according to claim 25 wherein the optical input selection device comprises:

(a) a first rotary element rotatable about the first central axis; and

(b) a first stationary element disposed adjacent to the first output end and including a plurality of circumferentially spaced first apertures, wherein each first aperture is disposed at the radially offset distance from the first central axis, and the first output end is alignable with a selected one of the first apertures through rotation of the first rotary element.

29. (New) The apparatus according to claim 28 wherein the optical output selection device comprises:

(a) a second rotary element rotatable about the second central axis; and

(b) a second stationary element disposed adjacent to the second input end and including a plurality of circumferentially spaced second apertures, wherein each second aperture is disposed at the radially offset distance from the second central

axis, and the second input end is alignable with a selected one of the second apertures through rotation of the second rotary element.

30. (New) The apparatus according to claim 29 wherein the first stationary element includes a first annular section coaxially disposed around the first rotary element, the second stationary element includes a second annular section coaxially disposed around the second rotary element, the optical input selection device includes a first bearing coaxially interposed between the first rotary element and the first annular section, and the optical output selection device includes a second bearing coaxially interposed between the second rotary element and the second annular section.

31. (New) The apparatus according to claim 25 wherein the optical input selection device comprises an internal optical fiber defining an optical path between the first input end and the first output end.

32. (New) The apparatus according to claim 31 wherein the optical output selection device comprises an internal optical fiber defining an optical path between the second input end and the second output end.

33. (New) The apparatus according to claim 25 comprising a motor communicating with the coupling mechanism for rotating the optical input selection device and the optical output selection device.

34. (New) An apparatus for selectively coupling fiber optic lines comprising:

(a) an optical input selection device rotatable about a first axis and comprising a first rotary element having a first internal bore and a first internal optical fiber extending through the first internal bore;

(b) an optical output selection device rotatable about a second axis and comprising a second rotary element having a second internal bore and a second internal optical fiber extending through the second internal bore; and

(c) a rotatable coupling mechanism interconnecting the optical input selection device and the optical output selection device.

35. (New) The apparatus according to claim 34 wherein the first and second axes are non-collinear.

36. (New) The apparatus according to claim 34 wherein the first internal optical fiber comprises a first input end disposed collinearly with the first axis and a first output end disposed at a radially offset distance from the first axis, and the second internal optical fiber comprises a second input end disposed at a radially offset distance from the second axis and a second output end disposed collinearly with the second axis.

37. (New) The apparatus according to claim 36 wherein the optical input selection device comprises a stationary element including a plurality of circumferentially spaced apertures, wherein each aperture is disposed at the radially offset distance from the first

axis, and the first output end is alignable with a selected one of the apertures through rotation of the first rotary element.

38. (New) The apparatus according to claim 34 comprising a motor communicating with the coupling mechanism for rotating the optical input selection device and the optical output selection device.

39. (New) A method for selecting an optical channel from a plurality of optical channels, comprising:

(a) providing an optical channel selecting device comprising a rotary member including an input side, an output side, and an internal optical path running between the input side and output side; and

(b) rotating the rotary member to a position corresponding to a selected optical channel at which the internal optical path can optically communicate with a corresponding one of a plurality of optical source lines and a corresponding one of a plurality of optical return lines separate from the optical source lines.

40. (New) The method according to claim 39 comprising transmitting an optical signal from the source line corresponding to the selected optical channel, to a test site at which a sample is exposed to the optical signal, and to the corresponding return line.

41. (New) The method according to claim 39 wherein rotating moves an output end of the internal optical path into alignment with the source line corresponding to the selected

optical channel, whereby an optical signal can be transmitted from the internal optical path to the corresponding source line and then to the corresponding return line.

42. (New) The method according to claim 41 wherein the output end of the internal optical path is disposed at a radially offset distance from an axis about which the rotary member rotates, and the plurality of source lines comprise respective source line input ends fixed in a circumferential arrangement, and rotating the rotary member causes the output end to rotate about the axis into alignment with the source line input end corresponding to the selected optical channel.

43. (New) The method according to claim 41 wherein the optical channel selecting device is an optical input selecting device, the rotary member is a first rotary member, the input side is a first input side, the output side is a first output side, and the internal optical path is a first internal optical path, and the method further comprises:

(a) providing an optical output selecting device comprising a second rotary member including a second input side, a second output side, and a second internal optical path running between the second input side and second output side; and

(b) rotating the second rotary member to a position corresponding to the selected optical channel at which an input end of the second internal optical path is aligned with the return line corresponding to the selected optical channel.

44. (New) The method according to claim 43 comprising actuating a coupling mechanism interconnecting the optical input selecting device and optical output selecting device to rotate the first and second rotary members.

45. (New) The method according to claim 41 wherein the plurality of return lines terminate at respective return line output ends mounted in alignment with a signal receiving device, and the method further comprises transmitting an optical signal over the selected optical channel whereby the optical signal is sent from the return line corresponding to the selected optical channel to the signal receiving device.

46. (New) The method according to claim 39 wherein rotating moves an input end of the internal optical path into alignment with the return line corresponding to the selected optical channel, whereby an optical signal can be transmitted through the source line, and then through the return line to the internal optical path.

47. (New) The method according to claim 46 comprising operating a light source to transmit optical signals through the plurality of source lines, whereby the optical signal transmitted through the source line corresponding to the selected optical channel is subsequently transmitted through the return line aligned with the input end of the internal optical path and into the internal optical path.

48. (New) The method according to claim 46 comprising transmitting the optical signal from an output end of the internal optical path to a signal receiving device.